

Network Description Documentation

AFBT0011A

Network 6/AFBTMA11A

Network 7/AFBTMB11A

Network 8/AFBTMC11A

Network 9/AFBTMD11A



Prepared by:

USMC Network Design Facility
Marine Corps Tactical Systems Support Activity

15 February 2001

WARNING WARNING WARNING

Warning: Modification of this network by unauthorized personnel is in violation of the CJCSI 6232.021A (01 JUN 1998) on Deconfliction.

AFBT0011A/USMC Networks 6, 7, 8, 9
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

TABLE OF CONTENTS

Section 1 - OVERVIEW	1
1.0 Introduction.....	1
1.1 Purpose	1
Section 2 – AFBTMA11A/USMC Network 6 - TAOM(1)	2
2.0 Executive Summary – AFBTMA11A/USMC Network 6	3
2.1 USMC Network 6 Functional Description – JTAOM(1).....	4
2.2 Operational Summary.....	4
2.3 Use Limitations.....	4
2.4 Participants	4
2.5 Network Participation Groups	5
APPENDIX A – AFBTMA11A/USMC Network 6.....	9
Connectivity Matrix – AFBTMA11A/USMC Network 6	10
Pulse Density Report – AFBTMA11A/USMC Network 6	12
Allocation Table – AFBTMA11A/USMC Network 6	13
COMSEC Cross Reference Table – AFBTMA11A/USMC Network 6	14
Time Line – AFBTMA11A/USMC Network 6	15
NDL File Name Table	16
APPENDIX B – AFBTMA11A/USMC Network 6	17
Participant JTAOM (1).....	18
Section 3 - AFBTMB11A/USMC Network 7 - ADCP(1)	19
3.0 Executive Summary – AFBTMB11A/USMC Network 7	20
3.1 USMC Network 7 Functional Description – ADCP(1).....	21
3.2 Operational Summary.....	21
3.3 Use Limitations.....	21
3.4 Participants	21
3.5 Network Participation Groups	22
APPENDIX A – AFBTMB11A/USMC Network 7	26
Connectivity Matrix – AFBTMB11A/USMC Network 7	27
Pulse Density Report - AFBTMB11A/USMC Network 7	29
Allocation Table – AFBTMB11A/USMC Network 7	30
COMSEC Cross Reference Table – AFBTMB11A/USMC Network 7	31
Time Line – AFBTMB11A/USMC Network 7	32
NDL File Name Table	33
APPENDIX B – AFBTMB11A/USMC Network 7	34
Participant ADCP (1).....	35
Section 4 - AFBTMC11A/USMC Network 8 - TAOM(1).....	36
4.0 Executive Summary – AFBTMC11A/USMC Network 8	37
4.1 USMC Network 8 Functional Description – JTAOM(1).....	38
4.2 Operational Summary.....	38
4.3 Use Limitations.....	38
4.4 Participants	38
4.5 Network Participation Groups	39

AFBT0011A/USMC Networks 6, 7, 8, 9
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

APPENDIX A – AFBTMC11A/USMC Network 8	43
Connectivity Matrix – AFBTMC11A/USMC Network 8	44
Pulse Density Report – AFBTMC11A/USMC Network 8	46
Allocation Table – AFBTMC11A/USMC Network 8	47
COMSEC Cross Reference Table – AFBTMC11A/USMC Network 8	48
Time Line – AFBTMC11A/USMC Network 8	49
NDL File Name Table	50
APPENDIX B – AFBTMC11A/USMC Network 8	51
Participant JTAOM (1).....	52
Section 5 -AFBTMD11A/USMC Network 9 - ADCP(1).....	53
5.0 Executive Summary – AFBTMD11A/USMC Network 9	54
5.1 USMC Network 9 Functional Description – ADCP(1).....	55
5.2 Operational Summary.....	55
5.3 Use Limitations.....	55
5.4 Participants	55
5.5 Network Participation Groups	56
APPENDIX A – AFBTMD11A/USMC Network 9.....	60
Connectivity Matrix – AFBTMD11A/USMC Network 9	61
Pulse Density Report - AFBTMD11A/USMC Network 9	63
Allocation Table – AFBTMD11A/USMC Network 9	64
COMSEC Cross Reference Table – AFBTMD11A/USMC Network 9	65
Time Line – AFBTMD11A/USMC Network 9	66
NDL File Name Table	67
APPENDIX B – AFBTMD11A/USMC Network 9	68
Participant ADCP (1).....	69

AFBT0011A/USMC Networks 6, 7, 8, 9
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Section 1 – OVERVIEW

1.0 Introduction

USMC Networks 6, 7, 8 and 9 are variants of Air Force network AFBT0011A that was developed as a test network for the Joint STARS TADIL-J Upgrade (TJU) flight test program. The pulse density values for each participant are provided for the purpose of deconflicting JTIDS use within geographic areas. Special attention should be given to the following notes, warnings throughout this description and their relevance to required Deconfliction/TSDF calculations to include any use of voice with this network.

The Marine Corps Network Design Facility developed USMC Networks 6, 7, 8 and 9 as variants of AFBT0011A to allow USMC JTIDS platforms, ADCP and JTAOM, as participants in the network using time slots of other service platforms when **those platforms are not active participants**. ADCP and JTAOM time slot assignments are as follows:

- AFBTMA11A/USMC Network 6: JTAOM(1) uses CRC(1) time slots
- AFBTMB11A/USMC Network 7: ADCP(1) uses CRC(1) time slots
- AFBTMC11A/USMC Network 8: JTAOM(1) uses JSTARS(2) time slots
- AFBTMD11A/USMC Network 9: ADCP(1) uses JSTARS(2) time slots

Original	Participants			
	USMC Variants of Network AFBT0011A			
AFBT0011A	USMC Network 6	USMC Network 7	USMC Network 8	USMC Network 9
2 – JSTARS(1)	2 – JSTARS(1)	2 – JSTARS(1)	1 – JSTARS(1)	1 – JSTARS(1)
JSTARS(2)	JSTARS(2)	JSTARS(2)	1 – JTAOM(1)	1 – ADCP(1)
2 – E3(1)	2 – E3(1)	2 – E3(1)	2 – E3(1)	2 – E3(1)
E3(2)	E3(2)	E3(2)	E3(2)	E3(2)
1 – E3I(IJMS)	1 – E3I(IJMS)	1 – E3I(IJMS)	1 – E3I(IJMS)	1 – E3I(IJMS)
1 – RJ(1)	1 – RJ(1)	1 – RJ(1)	1 – RJ(1)	1 – RJ(1)
1 – ABCCC(1)	1 – ABCCC(1)	1 – ABCCC(1)	1 – ABCCC(1)	1 – ABCCC(1)
1 – CRC(1)	1 – JTAOM(1)	1 – ADCP(1)	1 – CRC(1)	1 – CRC(1)
1 – EJSE(1)	1 – EJSE(1)	1 – EJSE(1)	1 – EJSE(1)	1 – EJSE(1)
1 – F15E(1.1.1)	1 – F15E(1.1.1)	1 – F15E(1.1.1)	1 – F15E(1.1.1)	1 – F15E(1.1.1)
1 – F15(1.1.1)	1 – F15(1.1.1)	1 – F15(1.1.1)	1 – F15(1.1.1)	1 – F15(1.1.1)

1.1 Purpose

The purpose of this documentation is to describe the USMC Networks 6, 7, 8 and 9 as variants of Network AFBT0011A. It was created to allow initialization and communications of tactical data between all participating units. This documentation and appropriate loading data is being delivered to the appropriate Marine Corps units and Joint Services. Each of the other services participating in this network should contact their appropriate Network Design Facility to acquire their loading media. The functional descriptions of each network are detailed in Sections 2, 3, 4 and 5 respectively.

AFBTMA11A/USMC Network 6
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Section 2

Network AFBTMA11A

USMC Network 6 – JTAOM(1)

AFBTMA11A/USMC Network 6
 MARINE CORPS NETWORK DESIGN FACILITY
 NETWORK DESCRIPTION

2.0 Executive Summary – AFBTMA11A/USMC Network 6									
Network:	AFBTMA11A USMC Networks 6, 7, 8, 9	Created for:	USMC Network variants created for ADCP and JTAOM participation in AF Network AFBT0001A						
Use Limitations:		IPF OVERRIDE = 100/50							
Participants:	USMC Platforms	USN Platforms	USA Platforms	USAF Platforms	Other Platforms				
USMC Network 6	1 JTAOM	NONE	NONE	2 - JSTARS 2 - E3 1 - E3I 1 - RJ 1 - ABCCC 1 - CRCI 1 - EJSE 1 - F15 1 - F15E					
Operational Summary:		1. Highest Platform TSDF = 41.80%							
Network Requested by:	MACS-2 ATTN: 1stLt Smith								
Send comments and Recommendations to:	USMC Network Design Facility Attn: AD-09 (MCNDF) Box 555171 Camp Pendleton, CA 92055-5171 E-mail: mcndf@mctssa.usmc.mil Website: http://www.mctssa.usmc.mil Telephone: DSN 365-2796/2133 COMM (760) 725-2796/2133								

AFBTMA11A/USMC Network 6
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

2.1 USMC Network 6 Functional Description – JTAOM(1)

USMC Network 6 was developed as a variant of Army Network AFBTMA11A by the Marine Corps Network Design Facility to support joint ground and air training operations for USMC platforms. Network 6 variant allows JTAOM(1) to use CRC(1) time slots as a participant in the network. The network participants are: JSTARS(1)/2, E3(1)/2, E3I(1), RJ(1), ABCCC(1), JTAOM(1), CRCI(1), EJSE(1), F15(1.1.1), F15E(1).

NOTES:

1. Network **IPF Override** is set to **1**, **TSDF** is set to **100/50**, **Communications Mode** is set to **Mode 1**, **TDMA Range** is **300 nmi**, **TSEC** and **MSEC** are set to **1**.
2. **JICO oversees all responsibility in managing network TSDF, NTR, and Relay assignments.**
3. **E3(1) and E3(2) are the only relay platforms assigned in the network.**
4. **JTAOM(1) cannot be in the network if CRC(1) is a participant.**

2.2 Operational Summary

1. 100/50

All participants do not have line of sight with every other participant. Only E3(1) or E3(2) will perform relay functions as designated by JICO.

2.3 Use Limitations

1. 100/50 IPF

2.4 Participants

USMC Platforms	USN Platforms	USA Platforms	USAF Platforms	Other
1 JTAOM			1 JSTARS 2 E3 1 E3I 1 RJ 1 ABCCC 1 EJSE 1 F15E/ 1 F15	

AFBTMA11A/USMC Network 6
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

2.5 Network Participation Groups

NPG #3 (RTT-B)

Participants:	All units, except E3I(1) and CRCI(1): transmit/receive
Access:	Contention access 4
Capacity:	9 total slots - 8 total contention; 1 s/f/u for E3(2)
Assigned Net:	0
Relay:	None
Packing Limit:	RTT

NPG #6 (PPLI-B)

Participants:	All units, except E3I(1) and CRCI(1)
Access:	Dedicated and Contention 10 Access
Capacity:	201 total slots
Assigned Net:	Net 1 all; net 2 for E3(2)
Relay:	E3(2) – Only E3(2) PPLI is relayed
Packing Limit:	P2SP and STD

NPG #7 (Surveillance)

Participants:	JSTARS(1)/2: transmit/receive. Own surveillance is not relayed. E3(1)/2: transmit/receive. Own surveillance is not relayed. RJ(1): transmit/receive. Own surveillance is not relayed. ABCCC(1): transmit/receive. Own surveillance is not relayed. JTAOM(1): transmit/receive. EJSE(1): receive only F15E/F15: receive only
Access:	Dedicated and Dedicated slot with reuse.
Capacity:	288 total slots
Assigned Net:	1
Relay:	E3(1) and E3(2) (Only JTAOM's surveillance is relayed in the network)
Packing Limit:	P2SP

NPG #8 (Weapons Coordination and Mission Management)

Participants:	JSTARS(1)/2: transmit/receive E3(1)/2: transmit/receive. RJ(1): receive only ABCCC(1): receive only JTAOM(1): transmit/receive. EJSE(1): transmit/receive F15E/F15: receive only
Access:	Dedicated and Dedicated slot with reuse
Capacity:	14 total slots

AFBTMA11A/USMC Network 6
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Assigned Net: 1
Relay: None
Packing Limit: P2SP

NPG #9 (Fighter Air Control Uplink)

Participants: E3(1)/2: transmit/receive
JTAOM(1): transmit/receive.
EJSE(1): transmit/receive
F15E/F15: receive only
Access: Dedicated with slot reuse
Capacity: 16 total slots
Assigned Net: 127 (stacked)
Relay: None
Packing Limit: P2SP and STD

NPG #9 (Fighter Air Control Backlink)

Participants: F15E/F15: transmit/receive
JTAOM(1): receive only
E3(1)/2: receive only
EJSE(1): transmit/receive
Access: Contention Access 10
Capacity: 96 total slots
Assigned Net: 127 (stacked)
Relay: None
Packing Limit: STD

NPG #10 (Electronic Warfare)

Participants: E3(1) and RJ(1): transmit/receive
EJSE(1): receive only
Access: Dedicated and Dedicated slot with reuse
Capacity: 8 total slots
Assigned Net: 1
Relay: None.
Packing Limit: P2SP

NPG #19 (Fighter/Fighter Targeting)

Participants: F15E/F15: transmit/receive
Access: Contention Access 14
Capacity: 160 total slots
Assigned Net: 1
Relay: None
Packing Limit: STD

AFBTMA11A/USMC Network 6
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

NPG #20 (NC2/NC2 Fighter/Fighter Targeting)

Participants: F15E/F15: transmit/receive
Access: Contention Access 14
Capacity: 96 total slots
Assigned Net: 1
Relay: None
Packing Limit: P2SP

NPG #29 (Residual Messages)

Participants: JSTARS(1)/2: transmit/receive
E3(1)/2: transmit/receive
RJ(1): transmit/receive
ABCCC(1): transmit/receive
JTAOM(1): transmit/receive
Access: Dedicated
Capacity: 32 total slots
Assigned Net: 1
Relay: None.
Packing Limit: P2SP

NPG #30 (P-Messages)

Participants: All units transmit/receive
Access: STD
Capacity: 109 total slots
Assigned Net: 0
Relay: E3(2)
Packing Limit: Standard

NPG #31 (T-Messages)

Participants: JSTARS(1)/2: transmit/receive
E3(1)/2: receive to relay only
RJ(1): transmit/receive
ABCCC: transmit/receive
CRCI(1): transmit/receive
EJSE: receive only
F15E/F15: receive only
Access: STD
Capacity: 444 total slots
Assigned Net: 0
Relay: E3(1)/2
Packing Limit: P2SP

AFBTMA11A/USMC Network 6
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

NPG V (IJMS Voice)

Participants:	E3(1)/2: transmit/receive E3I(1): transmit/receive RJ(1): transmit/receive ABCCC: transmit/receive JTAOM(1): transmit/receive CRCI(1): transmit/receive F15E/F15: transmit/receive
Access:	STD
Capacity:	128 total slots
Assigned Net:	127
Relay:	None
Packing Limit:	STD

AFBTMA11A/USMC Network 6
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

APPENDIX A – AFBTMA11A/USMC Network 6

CONNECTIVITY MATRIX
PULSE DENSITY REPORT
ALLOCATION TABLE
COMSEC CROSS REFERENCE TABLE
TIME LINE DISPLAY
NDL FILENAME TABLE

AFBTMA11A/USMC Network 6
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Connectivity Matrix – AFBTMA11A/USMC Network 6

Slot Group			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NPG Number			P	P	TY	P	TY	T	T	TY	T	T	T	V	3	6	6	TY	7	7	TY	
Net Number			0	2	0	0	0	0	0	0	0	0	0	127	0	1	1	2	1	1	1	1
TSEC Variable			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSEC Variable																						
Access Mode			D	D		7		D	D		D	D	D	R	4	D	10	D		D	D	
Packing Limit			STD	STD		STD		STD	STD		STD	STD	STD	STD		P2SP	STD	P2SP		P2SP	P2SP	
Per Unit Slots/Frame			1								104					1				32		
Total Slots/Frame			12	1	1	96	96	96	48	48	208	56	36	128	8	8	192	1	1	96	24	24
Participant ID	Net Entry Transmit Enabled	Default Net	Connectivity																			
			T/R		R	R	R	R	R	T/R	R	R		T	T/R	R		R	T/R	R	R	
1.JSTARS(1)	Y	1	T/R		R	R	R	R	R	T/R	R	R		T	T/R	R		R	T/R	R	R	
2.JSTARS(2)	Y	1	T/R		R	R	R	R	R	T/R	R	R		T	T/R	R		R	T/R	R	R	
3.E3(1)	Y	1	T/R		R	R	Y	R	R	Y		R	R	T	T	T/R	R		R	R	Y	
4.E3(2)	Y	1	R	T	Y	R	Y	R	R	Y		R	R	T	T	T/R	R	T	Y	R	R	
5.E3I(1)	Y		T/R		R	R	Y	T	R	R	R	R	R	T								
6.RJ(1)	Y	1	T/R		R	R	R	R	R		T	R		T	T/R	R		R	R	R	R	
7.ABCCC(1)	Y	1	T/R		R	R	R	R	R		R	T		T	T/R	R		R	R	R	R	
8.JTAOM(1)	Y	1	T/R		R	R	R							T	T	T/R	R		R	R	T	R
9.CRCI(1)	Y		T/R		R	R	R	T	R	R	R	R	T									
10.EJSE(1)	Y	1	T/R		R	R	R	R	R		R	R		T	T/R	R		R	T/R	R	R	
11.F15E(1)	Y	1	R		R	T	R	R	R		R	R		T	T	R	T		R	R	R	
12.F15(1.1.1)	Y	1	R		R	T	R	R	R		R	R		T	T	R	T		R	R	R	

AFTBMA11A/USMC Network 6
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Connectivity Matrix – AFTBMA11A/USMC Network 6 Cont'd

Slot Group		21	22	23	24	25	26	27	28	29	30	31	32	33
NPG Number		7	7	7	8	8	8	9	9	10	10	19	20	29
Net Number		1	1	1	1	1	1	127	127	1	1	1	1	1
TSEC Variable		1	1	1	1	1	1	1	1	1	1	1	2	1
MSEC Variable														
Access Mode		R	D	D	R	D	D	R	10	R	D	14	14	D
Packing Limit		P2SP	P2SP	P2SP	P2SP	P2SP	P2SP	P2SP	STD	P2SP	P2SP	P2SP	P2SP	P2SP
Per Unit Slots/Frame								2						4
Total Slots/Frame		48	16	8	4	4	6	16	96	4	4	160	96	32
Participant ID	Net Entry Transmit Enabled	Default Net	Connectivity											
1.JSTARS(1)	Y	1	R	R	R			T/R						T/R
2.JSTARS(2)	Y	1	R	R	R			T/R						T/R
3.E3(1)	Y	1	T	R	R	T	R		T	R	T	R		T/R
4.E3(2)	Y	1	T	R	R	T	R		T	R	T	R		T/R
5.E3I(1)	Y													
6.RJ(1)	Y	1	R	T	R	R	R			R	T			T/R
7.ABCCC(1)	Y	1	R	R	T	R	R							T/R
8.JTAOM(1)	Y	1	R	R	R	R	T		T	R				T/R
9.CRCI(1)	Y													
10.EJSE(1)	Y	1	R	R	R	R	R	T/R	T		R	R		T/R
11.F15E(1)	Y	1	R	R	R	R	R		R	T			T	T
12.F15(1.1.1)	Y	1	R	R	R	R	R		R	T			T	T

AFBTMA11A/USMC Network 6
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Pulse Density Report – AFBTMA11A/USMC Network 6

Check for active platform	Participant	Data Without Relay	Data With Relay
	1.JSTARS(1)	9.51%	9.51%
	2.JSTARS(2)	9.51%	9.51%
	3.E3(1)	13.55%	18.24%
	4.E3(2)	13.32%	24.39%
	5.E3I(1)	14.68%	20.93%
	6.RJ(1)	5.44%	5.44%
	7.ABCCC(1)	3.36%	3.36%
	8.JTAOM(1)	10.16%	10.16%
	9.CRCI(1)	11.56%	11.56%
	10.EJSE(1)	5.34%	5.34%
	11.F15E(1)	41.80%	41.80%
	12.F15(1.1.1)	41.80%	41.80%

If the Frequency Assignment authorizes TADIL-J Voice, add the below percentages to the above platforms transmitting TADIL-J Voice.

		Without Relay	With Relay
2.4 Kbps	Voice A	0.0%	3.30%
N/A	Voice B	0.0%	0.0%

Example of TSDF calculation:

E3(1): (Data with Relay = 18.24%) + (Voice 'A' with Relay = 3.30%)
 Total Data/Voice with Relay = 21.54%

In the above example you would enter the result into the Deconfliction Server. Other platform results may vary if Voice or Relay is used.

AFTBMA11A/USMC Network 6
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Allocation Table – AFTBMA11A/USMC Network 6

SB / Agg	Net Req.	Net	Set	Idx	RRN
1.1	0	0	B	28	9
1.2	0	0	B	34	8
2.1	2	2	C	14	6
3.1	0	0	B	18	6
4.1	0	0	A	2	12
4.2	0	0	A	3	11
5.1	0	0	A	6	12
5.2	0	0	A	11	11
6.1	0	0	A	1	12
6.2	0	0	A	7	11
7.1	0	0	A	15	11
7.2	0	0	B	4	10
8.1	0	0	C	8	11
8.2	0	0	B	6	10
9.1	0	0	A	0	12
9.2	0	0	A	4	12
9.3	0	0	A	5	11
9.4	0	0	A	13	11
9.5	0	0	B	20	9
9.6	0	0	B	52	9
10.1	0	0	B	0	11
10.2	0	0	B	12	10
10.3	0	0	B	60	9
11.1	0	0	B	8	11
11.2	0	0	B	98	8
12.1	127	127	C	1	13
13.1	0	0	B	2	9
14.1	1	1	C	10	9
15.1	1	1	B	1	13
15.2	1	1	B	3	12
16.1	2	2	A	272	6
17.1	1	1	B	274	6
18.1	1	1	B	7	11
18.2	1	1	B	15	11
18.3	1	1	B	10	10
18.4	1	1	B	26	10
19.1	1	1	B	22	10
19.2	1	1	B	50	9
20.1	1	1	C	26	10
20.2	1	1	C	54	9
21.1	1	1	B	14	11
21.2	1	1	C	2	10
22.1	1	1	C	18	10
23.1	1	1	C	42	9
24.1	1	1	B	20	8
25.1	1	1	B	84	8
26.1	1	1	B	82	8
26.2	1	1	B	146	7
27.1	127	127	C	6	10
28.1	127	127	C	3	12
28.2	127	127	C	7	11
29.1	1	1	B	52	8
30.1	1	1	B	116	8
31.1	1	1	A	0	13
31.2	1	1	C	0	11
32.1	1	1	A	5	12
32.2	1	1	C	4	11
33.1	1	1	C	12	11

AFBTMA11A/USMC Network 6
 MARINE CORPS NETWORK DESIGN FACILITY
 NETWORK DESCRIPTION

COMSEC Cross Reference Table – AFBTMA11A/USMC Network 6

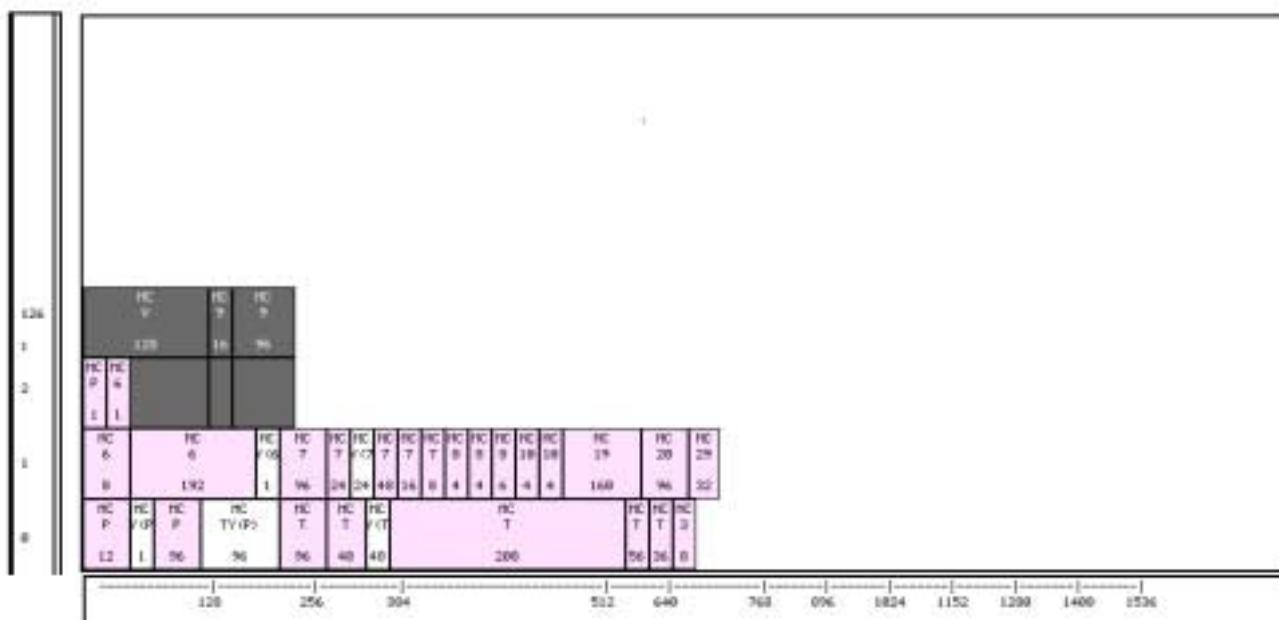
Default MSEC = 1			Default TSEC = 1		
SDU Locations					
Participant	0/1	2/3	4/5	6/7	Overflow
JSTARS(1)	1				
JSTARS(2)	1				
E3(1)	1				
E3(2)	1				
E3I(1)				1	
RJ(1)	1				
ABCCC(1)	1				
JTAOM(1)	1				
CRCI(1)				1	
EJSE(1)	1				
F15E(1)	1	2			
F15(1.1.1)	1	2			

AFBTMA11A/USMC Network 6
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Time Line – AFBTMA11A/USMC Network 6

Time Line Display Status: CREATED

Nets



Total Slots/Frame

Note: Not to scale

AFBTMA11A/USMC Network 6
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

NDL File Name Table

Platforms referenced in the below table correspond with specific NDL file names or Network file identification numbers for each respective participant platform.

Network Platform Name By Service		File Name/Network Used By Host System
Marine Corps		
JTAOM	JTAOM(1)	TAOM1_6.PF

AFBTMA11A/USMC Network 6
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

APPENDIX B – AFBTMA11A/USMC Network 6

SHORT FORM REPORT FOR JTAOM (1)

AFBTMA11A/USMC Network 6
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Participant JTAOM (1)

Participant	Block Id. No.	Slot Type	Msg Cat	Total Slots Req'd	Slot Blocks Req'd	Slot Group A=Agg	Slot Group Elem.	Set	Index	RRN	Net	Relay Delay
JTAOM(1)	1	T	30	1	1	1.1	7	B	220	6	0	0
	2	T	3	8	8	13.1	0	B	2	9	0	0
	3	T	6	1	1	14.1	7	C	202	6	1	0
	4	T	7	24	16	19.1	0	B	22	10	1	0
	5	T	7		8	19.2	0	B	50	9	1	0
	6	T	8	4	4	25.1	0	B	84	8	1	0
	7	T	9	16	16	27.1	0	C	6	10	127	0
	8	T	29	4	4	33.1	7	C	60	8	1	0
	9	R	30	12	8	1.1	0	B	28	9	0	0
	10	R	30		4	1.2	0	B	34	8	0	0
	11	R	30	1	1	3.1	0	B	18	6	0	0
	12	R	30	96	64	4.1	0	A	2	12	0	0
	13	R	30		32	4.2	0	A	3	11	0	0
	14	R	30	96	64	5.1	0	A	6	12	0	0
	15	R	30		32	5.2	0	A	11	11	0	0
	16	R	6	8	8	14.1	0	C	10	9	1	0
	17	R	6	192	128	15.1	0	B	1	13	1	0
	18	R	6		64	15.2	0	B	3	12	1	0
	19	R	6	1	1	17.1	0	B	274	6	1	0
	20	R	7	96	32	18.1	0	B	7	11	1	0
	21	R	7		32	18.2	0	B	15	11	1	0
	22	R	7		16	18.3	0	B	10	10	1	0
	23	R	7		16	18.4	0	B	26	10	1	0
	24	R	7	24	16	20.1	0	C	26	10	1	0
	25	R	7		8	20.2	0	C	54	9	1	0
	26	R	7	48	32	21.1	0	B	14	11	1	0
	27	R	7		16	21.2	0	C	2	10	1	0
	28	R	7	16	16	22.1	0	C	18	10	1	0
	29	R	7	8	8	23.1	0	C	42	9	1	0
	30	R	8	4	4	24.1	0	B	20	8	1	0
	31	R	9	96	64	28.1	0	C	3	12	127	0
	32	R	9		32	28.2	0	C	7	11	127	0
	33	R	29	32	32	33.1	0	C	12	11	1	0

AFBTMB11A/USMC Network 7
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Section 3

Network AFBTMB11A

USMC Network 7 – ADCP(1)

AFBTMB11A/USMC Network 7
 MARINE CORPS NETWORK DESIGN FACILITY
 NETWORK DESCRIPTION

3.0 Executive Summary – AFBTMB11A/USMC Network 7					
Network:	AFBTMB11A USMC Networks 6, 7, 8, 9	Created for:	USMC Network variants created for ADCP and JTAOM participation in AF Network AFBT0001A		
Use Limitations:		IPF OVERRIDE = 100/50			
Participants:	USMC Platforms	USN Platforms	USA Platforms	USAF Platforms	Other Platforms
USMC Network 7	1 ADCP	NONE	NONE	2 - JSTARS(1) 2 - E3(1) 1 - E3I 1 - RJ 1 - ABCCC 1 - CRCI 1 - EJSE 1 - F15 1 - F15E	
Operational Summary:		1. Highest Platform TSDF = 41.80%			
Network Requested by:		MACS-2 ATTN: 1stLt Smith			
Send comments and Recommendations to:	USMC Network Design Facility Attn: AD-09 (MCNDF) Box 555171 Camp Pendleton, CA 92055-5171 E-mail: mcndf@mctssa.usmc.mil Website: http://www.mctssa.usmc.mil Telephone: DSN 365-2796/2133 COMM (760) 725-2796/2133				

AFBTMB11A/USMC Network 7
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

3.1 USMC Network 7 Functional Description – ADCP(1)

USMC Network 7 was developed as a variant of Army Network AFBTMB11A by the Marine Corps Network Design Facility to support joint ground and air training operations for USMC platforms. Network 7 variant allows ADCP(1) to use CRC(1) time slots as a participant in the network. The network participants are: JSTARS(1)/2, E3(1)/2, E3I(1), RJ(1), ABCCC(1), ADCP(1), CRCI(1), EJSE(1), F15(1.1.1), F15E(1).

NOTES:

1. Network **IPF Override** is set to **1**, **TSDF** is set to **100/50**, **Communications Mode** is set to **Mode 1**, **TDMA Range** is **300 nmi**, **TSEC** and **MSEC** are set to **1**.
2. **JICO oversees all responsibility in managing network TSDF, NTR, and Relay assignments.**
3. **E3(1) and E3(2) are the only relay platforms assigned in the network.**
4. **ADCP(1) cannot be in the network if CRC(1) is a participant.**

3.2 Operational Summary

1. 100/50

All participants do not have line of sight with every other participant. Only E3(1) or E3(2) will perform relay functions as designated by JICO.

3.3 Use Limitations

1. 100/50 IPF

3.4 Participants

USMC Platforms	USN Platforms	USA Platforms	USAF Platforms	Other
1 ADCP			1 JSTARS 2 E3 1 E3I 1 RJ 1 ABCCC 1 CRCI 1 EJSE 1 F15E/ 1 F15	

AFBTMB11A/USMC Network 7
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

3.5 Network Participation Groups

NPG #3 (RTT-B)

Participants:	All units, except E3I(1) and CRCI(1): transmit/receive
Access:	Contention access 4
Capacity:	9 total slots - 8 total contention; 1 s/f/u for E3(2)
Assigned Net:	0
Relay:	None
Packing Limit:	RTT

NPG #6 (PPLI-B)

Participants:	All units, except E3I(1) and CRCI(1)
Access:	Dedicated and Contention 10 Access
Capacity:	201 total slots
Assigned Net:	Net 1 all; net 2 for E3(2)
Relay:	E3(2) – Only E3(2) PPLI is relayed
Packing Limit:	P2SP and STD

NPG #7 (Surveillance)

Participants:	JSTARS(1)/2: transmit/receive. Own surveillance is not relayed. E3(1)/2: transmit/receive. Own surveillance is not relayed. RJ(1): transmit/receive. Own surveillance is not relayed. ABCCC(1): transmit/receive. Own surveillance is not relayed. ADCP(1): transmit/receive. EJSE(1): receive only F15E/F15: receive only
Access:	Dedicated and Dedicated slot with reuse.
Capacity:	288 total slots
Assigned Net:	1
Relay:	E3(1) and E3(2) (Only ADCP's surveillance is relayed in the network)
Packing Limit:	P2SP

NPG #8 (Weapons Coordination and Mission Management)

Participants:	JSTARS(1)/2: transmit/receive E3(1)/2: transmit/receive. RJ(1): receive only ABCCC(1): receive only ADCP(1): transmit/receive. EJSE(1): transmit/receive F15E/F15: receive only
---------------	---

AFBTMB11A/USMC Network 7
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Access:	Dedicated and Dedicated slot with reuse
Capacity:	14 total slots
Assigned Net:	1
Relay:	None
Packing Limit:	P2SP

NPG #9 (Fighter Air Control Uplink)

Participants:	E3(1)/2: transmit/receive ADCP(1): transmit/receive. EJSE(1): transmit/receive F15E/F15: receive only
Access:	Dedicated with slot reuse
Capacity:	16 total slots
Assigned Net:	127 (stacked)
Relay:	None
Packing Limit:	P2SP and STD

NPG #9 (Fighter Air Control Backlink)

Participants:	F15E/F15: transmit/receive ADCP(1): receive only E3(1)/2: receive only EJSE(1): transmit/receive
Access:	Contention Access 10
Capacity:	96 total slots
Assigned Net:	127 (stacked)
Relay:	None
Packing Limit:	STD

NPG #10 (Electronic Warfare)

Participants:	E3(1) and RJ(1): transmit/receive EJSE(1): receive only
Access:	Dedicated and Dedicated slot with reuse
Capacity:	8 total slots
Assigned Net:	1
Relay:	None.
Packing Limit:	P2SP

NPG #19 (Fighter/Fighter Targeting)

Participants:	F15E/F15: transmit/receive
Access:	Contention Access 14
Capacity:	160 total slots
Assigned Net:	1
Relay:	None
Packing Limit:	STD

AFBTMB11A/USMC Network 7
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

NPG #20 (NC2/NC2 Fighter/Fighter Targeting)

Participants:	F15E/F15: transmit/receive
Access:	Contention Access 14
Capacity:	96 total slots
Assigned Net:	1
Relay:	None
Packing Limit:	P2SP

NPG #29 (Residual Messages)

Participants:	JSTARS(1)/2: transmit/receive E3(1)/2: transmit/receive RJ(1): transmit/receive ABCCC(1): transmit/receive ADCP(1): transmit/receive
Access:	Dedicated
Capacity:	32 total slots
Assigned Net:	1
Relay:	None.
Packing Limit:	P2SP

NPG #30 (P-Messages)

Participants:	All units transmit/receive
Access:	STD
Capacity:	109 total slots
Assigned Net:	0
Relay:	E3(2)
Packing Limit:	Standard

NPG #31 (T-Messages)

Participants:	JSTARS(1)/2: transmit/receive E3(1)/2: receive to relay only RJ(1): transmit/receive ABCCC: transmit/receive CRCI(1): transmit/receive EJSE: receive only F15E/F15: receive only
Access:	STD
Capacity:	444 total slots
Assigned Net:	0
Relay:	E3(1)/2
Packing Limit:	P2SP

AFBTMB11A/USMC Network 7
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

NPG V (IJMS Voice)

Participants:	E3(1)/2: transmit/receive E3I(1): transmit/receive RJ(1): transmit/receive ABCCC: transmit/receive F15E/F15: transmit/receive
Access:	STD
Capacity:	128 total slots
Assigned Net:	127
Relay:	None
Packing Limit:	STD

AFBTMB11A/USMC Network 7
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

APPENDIX A – AFBTMB11A/USMC Network 7

CONNECTIVITY MATRIX
PULSE DENSITY REPORT
ALLOCATION TABLE
COMSEC CROSS REFERENCE TABLE
TIME LINE DISPLAY
NDL FILENAME TABLE

AFBTMB11A/USMC Network 7
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Connectivity Matrix – AFBTMB11A/USMC Network 7

Slot Group		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NPG Number		P	P	TY	P	TY	T	T	TY	T	T	T	V	3	6	6	6	TY	7	7	TY
Net Number		0	2	0	0	0	0	0	0	0	0	0	127	0	1	1	2	1	1	1	1
TSEC Variable		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSEC Variable																					
Access Mode		D	D		7		D	D		D	D	D	R	4	D	10	D		D	D	
Packing Limit		STD	STD		STD		STD	STD		STD	STD	STD	STD		P2SP	STD	P2SP		P2SP	P2SP	
Per Unit Slots/Frame		1							104					1				32			
Total Slots/Frame		12	1	1	96	96	96	48	48	208	56	36	128	8	8	192	1	1	96	24	24
Participant ID	Net Entry Transmit Enabled	Default Net	Connectivity																		
1.JSTARS(1)	Y	1	T/R		R	R	R	R	R	T/R	R	R		T	T/R	R		R	T/R	R	R
2.JSTARS(2)	Y	1	T/R		R	R	R	R	R	T/R	R	R		T	T/R	R		R	T/R	R	R
3.E3(1)	Y	1	T/R		R	R	Y	R	R	Y		R	R	T	T	T/R	R		R	R	R
4.E3(2)	Y	1	R	T	Y	R	Y	R	R	Y		R	R	T	T	T/R	R	T	Y	R	R
5.E3I(1)	Y		T/R		R	R	Y	T	R	R	R	R	R	T							
6.RJ(1)	Y	1	T/R		R	R	R	R	R	R		T	R		T	T/R	R		R	R	R
7.ABCCC(1)	Y	1	T/R		R	R	R	R	R	R		R	T		T	T/R	R		R	R	R
8.ADCP(1)	Y	1	T/R		R	R	R							T	T/R	R		R	R	T	R
9.CRCI(1)	Y		T/R		R	R	R	R	T	R	R	R	R	T							
10.EJSE(1)	Y	1	T/R		R	R	R	R	R	R		R	R		T	T/R	R		R	T/R	R
11.F15E(1)	Y	1	R		R	T	R	R	R	R		R	R	T	T	R	T		R	R	R
12.F15(1.1.1)	Y	1	R		R	T	R	R	R	R		R	R	T	T	R	T		R	R	R

AFBTMB11A/USMC Network 7
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Connectivity Matrix – AFBTMB11A/USMC Network 7 Cont'd

Slot Group		21	22	23	24	25	26	27	28	29	30	31	32	33
NPG Number		7	7	7	8	8	8	9	9	10	10	19	20	29
Net Number		1	1	1	1	1	1	127	127	1	1	1	1	1
TSEC Variable		1	1	1	1	1	1	1	1	1	1	1	2	1
MSEC Variable														
Access Mode		R	D	D	R	D	D	R	10	R	D	14	14	D
Packing Limit		P2SP	P2SP	P2SP	P2SP	P2SP	P2SP	P2SP	STD	P2SP	P2SP	P2SP	P2SP	P2SP
Per Unit Slots/Frame								2						4
Total Slots/Frame		48	16	8	4	4	6	16	96	4	4	160	96	32
Participant ID	Net Entry Transmit Enabled	Default Net	Connectivity											
1.JSTARS(1)	Y	1	R	R	R			T/R						T/R
2.JSTARS(2)	Y	1	R	R	R			T/R						T/R
3.E3(1)	Y	1	T	R	R	T	R		T	R	T	R		T/R
4.E3(2)	Y	1	T	R	R	T	R		T	R	T	R		T/R
5.E3I(1)	Y													
6.RJ(1)	Y	1	R	T	R	R	R				R	T		T/R
7.ABCCC(1)	Y	1	R	R	T	R	R							T/R
8.ADCP(1)	Y	1	R	R	R	R	T		T	R				T/R
9.CRCI(1)	Y													
10.EJSE(1)	Y	1	R	R	R	R	R	T/R	T		R	R		T/R
11.F15E(1)	Y	1	R	R	R	R	R		R	T			T	T
12.F15(1.1.1)	Y	1	R	R	R	R	R		R	T			T	T

AFBTMB11A/USMC Network 7
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Pulse Density Report - AFBTMB11A/USMC Network 7

Check for active platform	Participant	Data Without Relay	Data With Relay
	1.JSTARS(1)	9.48%	9.48%
	2.JSTARS(2)	9.48%	9.48%
	3.E3(1)	13.55%	18.24%
	4.E3(2)	13.32%	24.39%
	5.E3I(1)	14.68%	20.93%
	6.RJ(1)	5.44%	5.44%
	7.ABCCC(1)	3.36%	3.36%
	8.ADCP(1)	1.83%	1.83%
	9.CRCI(1)	11.56%	11.56%
	10.EJSE(1)	5.34%	5.34%
	11.F15E(1)	41.80%	41.80%
	12.F15(1.1.1)	41.80%	41.80%

If the Frequency Assignment authorizes TADIL-J Voice, add the below percentages to the above platforms transmitting TADIL-J Voice.

		Without Relay	With Relay
2.4 Kbps	Voice A	0.0%	3.30%
N/A	Voice B	0.0%	0.0%

Example of TSDF calculation:

E3(1): (Data with Relay = 18.24%) + (Voice 'A' with Relay = 3.30%)
 Total Data/Voice with Relay = 21.54%

In the above example you would enter the result into the Deconfliction Server. Other platform results may vary if Voice or Relay is used.

AFBTMB11A/USMC Network 7
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Allocation Table – AFBTMB11A/USMC Network 7

SB / Agg	Net Req.	Net	Set	Idx	RRN
1.1	0	0	B	28	9
1.2	0	0	B	34	8
2.1	2	2	C	14	6
3.1	0	0	B	18	6
4.1	0	0	A	2	12
4.2	0	0	A	3	11
5.1	0	0	A	6	12
5.2	0	0	A	11	11
6.1	0	0	A	1	12
6.2	0	0	A	7	11
7.1	0	0	A	15	11
7.2	0	0	B	4	10
8.1	0	0	C	8	11
8.2	0	0	B	6	10
9.1	0	0	A	0	12
9.2	0	0	A	4	12
9.3	0	0	A	5	11
9.4	0	0	A	13	11
9.5	0	0	B	20	9
9.6	0	0	B	52	9
10.1	0	0	B	0	11
10.2	0	0	B	12	10
10.3	0	0	B	60	9
11.1	0	0	B	8	11
11.2	0	0	B	98	8
12.1	127	127	C	1	13
13.1	0	0	B	2	9
14.1	1	1	C	10	9
15.1	1	1	B	1	13
15.2	1	1	B	3	12
16.1	2	2	A	272	6
17.1	1	1	B	274	6
18.1	1	1	B	7	11
18.2	1	1	B	15	11
18.3	1	1	B	10	10
18.4	1	1	B	26	10
19.1	1	1	B	22	10
19.2	1	1	B	50	9
20.1	1	1	C	26	10
20.2	1	1	C	54	9
21.1	1	1	B	14	11
21.2	1	1	C	2	10
22.1	1	1	C	18	10
23.1	1	1	C	42	9
24.1	1	1	B	20	8
25.1	1	1	B	84	8
26.1	1	1	B	82	8
26.2	1	1	B	146	7
27.1	127	127	C	6	10
28.1	127	127	C	3	12
28.2	127	127	C	7	11
29.1	1	1	B	52	8
30.1	1	1	B	116	8
31.1	1	1	A	0	13
31.2	1	1	C	0	11
32.1	1	1	A	5	12
32.2	1	1	C	4	11
33.1	1	1	C	12	11

AFBTMB11A/USMC Network 7
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

COMSEC Cross Reference Table – AFBTMB11A/USMC Network 7

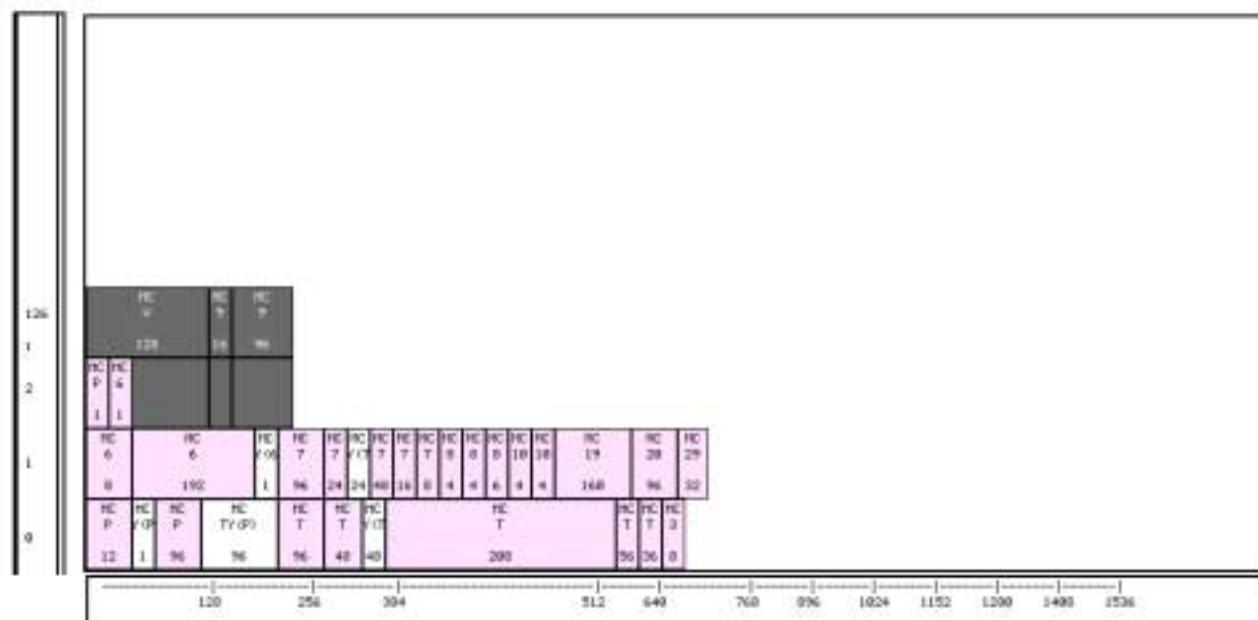
Default MSEC = 1			Default TSEC = 1			
Participant	SDU Locations					Overflow
	0/1	2/3	4/5	6/7		
JSTARS(1)	1					
JSTARS(2)	1					
E3(1)	1					
E3(2)	1					
E3I(1)					1	
RJ(1)	1					
ABCCC(1)	1					
ADCP(1)	1					
CRCI(1)					1	
EJSE(1)	1					
F15E(1)	1	2				
F15(1.1.1)	1	2				

AFBTMB11A/USMC Network 7
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Time Line – AFBTMB11A/USMC Network 7

Time Line Display Status: CREATED

Nets



Total Slots/Frame

Note: Not to scale

AFBTMB11A/USMC Network 7
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

NDL File Name Table

Platforms referenced in the below table correspond with specific NDL file names or Network file identification numbers for each respective participant platform.

Network Platform Name By Service		File Name/Network Used By Host System
Marine Corps		
ADCP	ADCP(1)	ADCP1_7.PF

AFBTMB11A/USMC Network 7
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

APPENDIX B – AFBTMB11A/USMC Network 7

SHORT FORM REPORT FOR ADCP (1)

AFTMB11A/USMC Network 7
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Participant ADCP (1)

Participant	Block Id. No.	Slot Type	Msg Cat	Total Slots Req'd	Slot Blocks Req'd	Slot Group A=Agg	Slot Group Elem.	Set	Index	RRN	Net	Relay Delay
ADCP(1)	1	T	30	1	1	1.1	7	B	220	6	0	0
	2	T	3	8	8	13.1	0	B	2	9	0	0
	3	T	6	1	1	14.1	7	C	202	6	1	0
	4	T	7	24	16	19.1	0	B	22	10	1	0
	5	T	7		8	19.2	0	B	50	9	1	0
	6	T	8	4	4	25.1	0	B	84	8	1	0
	7	T	9	16	16	27.1	0	C	6	10	127	0
	8	T	29	4	4	33.1	7	C	60	8	1	0
	9	R	30	12	8	1.1	0	B	28	9	0	0
	10	R	30		4	1.2	0	B	34	8	0	0
	11	R	30	1	1	3.1	0	B	18	6	0	0
	12	R	30	96	64	4.1	0	A	2	12	0	0
	13	R	30		32	4.2	0	A	3	11	0	0
	14	R	30	96	64	5.1	0	A	6	12	0	0
	15	R	30		32	5.2	0	A	11	11	0	0
	16	R	6	8	8	14.1	0	C	10	9	1	0
	17	R	6	192	128	15.1	0	B	1	13	1	0
	18	R	6		64	15.2	0	B	3	12	1	0
	19	R	6	1	1	17.1	0	B	274	6	1	0
	20	R	7	96	32	18.1	0	B	7	11	1	0
	21	R	7		32	18.2	0	B	15	11	1	0
	22	R	7		16	18.3	0	B	10	10	1	0
	23	R	7		16	18.4	0	B	26	10	1	0
	24	R	7	24	16	20.1	0	C	26	10	1	0
	25	R	7		8	20.2	0	C	54	9	1	0
	26	R	7	48	32	21.1	0	B	14	11	1	0
	27	R	7		16	21.2	0	C	2	10	1	0
	28	R	7	16	16	22.1	0	C	18	10	1	0
	29	R	7	8	8	23.1	0	C	42	9	1	0
	30	R	8	4	4	24.1	0	B	20	8	1	0
	31	R	9	96	64	28.1	0	C	3	12	127	0
	32	R	9		32	28.2	0	C	7	11	127	0
	33	R	29	32	32	33.1	0	C	12	11	1	0

AFBTMC11A/USMC Network 8
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Section 4

Network AFBTMC11A

USMC Network 8 – JTAOM(1)

AFBTMC11A/USMC Network 8
 MARINE CORPS NETWORK DESIGN FACILITY
 NETWORK DESCRIPTION

4.0 Executive Summary – AFBTMC11A/USMC Network 8					
Network:	AFBTMC11A USMC Networks 6, 7, 8, 9	Created for:	USMC Network variants created for ADCP and JTAOM participation in AF Network AFBT0001A		
Use Limitations:	IPF OVERRIDE = 100/50				
Participants:	USMC Platforms	USN Platforms	USA Platforms	USAF Platforms	Other Platforms
USMC Network 8	1 JTAOM	NONE	NONE	1 - JSTARS(1) 2 - E3(1) 1 - E3I 1 - RJ 1 - ABCCC 1 - CRC 1 - CRCI 1 - EJSE 1 - F15 1 - F15E	
Operational Summary:	1. Highest Platform TSDF = 41.80%				
Network Requested by:	MACS-2 ATTN: 1stLt Smith				
Send comments and Recommendations to:	USMC Network Design Facility Attn: AD-09 (MCNDF) Box 555171 Camp Pendleton, CA 92055-5171 E-mail: mcndf@mctssa.usmc.mil Website: http://www.mctssa.usmc.mil Telephone: DSN 365-2796/2133 COMM (760) 725-2796/2133				

AFBTMC11A/USMC Network 8
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

4.1 USMC Network 8 Functional Description – JTAOM(1)

USMC Network 8 was developed as a variant of Army Network AFBTMC11A by the Marine Corps Network Design Facility to support joint ground and air training operations for USMC platforms. Network 8 variant allows JTAOM(1) to use JSTARS(2) time slots as a participant in the network. The network participants are: JSTARS(1), JTAOM(1), E3(1)/2, E3I(1), RJ(1), ABCCC(1), CRC(1), CRCI(1), EJSE(1), F15(1.1.1), F15E(1).

NOTES:

1. Network **IPF Override** is set to **1**, **TSDF** is set to **100/50**, **Communications Mode** is set to **Mode 1**, **TDMA Range** is **300 nmi**, **TSEC** and **MSEC** are set to **1**.
2. **JICO oversees all responsibility in managing network TSDF, NTR, and Relay assignments.**
3. **E3(1) and E3(2) are the only relay platforms assigned in the network.**
4. **JTAOM(1) cannot be in the network if JSTARS(2) is a participant.**

4.2 Operational Summary

1. 100/50

All participants do not have line of sight with every other participant. Only E3(1) or E3(2) will perform relay functions as designated by JICO.

4.3 Use Limitations

1. 100/50 IPF

4.4 Participants

USMC Platforms	USN Platforms	USA Platforms	USAF Platforms	Other
1 JTAOM			1 JSTARS 2 E3 1 E3I 1 RJ 1 ABCCC 1 CRC 1 CRCI 1 EJSE 1 F15E/ 1 F15	

AFBTMC11A/USMC Network 8
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

4.5 Network Participation Groups

NPG #3 (RTT-B)

Participants: All units, except E3I(1) and CRCI(1): transmit/receive
Access: Contention access 4
Capacity: 9 total slots - 8 total contention; 1 s/f/u for E3(2)
Assigned Net: 0
Relay: None
Packing Limit: RTT

NPG #6 (PPLI-B)

Participants: All units, except E3I(1) and CRCI(1)
Access: Dedicated and Contention 10 Access
Capacity: 201 total slots
Assigned Net: Net 1 all; net 2 for E3(2)
Relay: E3(2) – Only E3(2) PPLI is relayed
Packing Limit: P2SP and STD

NPG #7 (Surveillance)

Participants:
JSTARS(1): transmit/receive. Own surveillance is not relayed.
JTAOM(1): transmit/receive. Own surveillance is not relayed
E3(1)/2: transmit/receive. Own surveillance is not relayed.
RJ(1): transmit/receive. Own surveillance is not relayed.
ABCCC(1): transmit/receive. Own surveillance is not relayed.
CRC(1): transmit/receive.
EJSE(1): receive only
F15E/F15: receive only
Access: Dedicated and Dedicated slot with reuse.
Capacity: 288 total slots
Assigned Net: 1
Relay: E3(1) and E3(2) (Only CRC's surveillance is relayed in the network)
Packing Limit: P2SP

NPG #8 (Weapons Coordination and Mission Management)

Participants:
JSTARS(1): transmit/receive
JTAOM(1): transmit/receive
E3(1)/2: transmit/receive.
RJ(1): receive only
ABCCC(1): receive only
CRC(1): transmit/receive.
EJSE(1): transmit/receive
F15E/F15: receive only

AFBTMC11A/USMC Network 8
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Access:	Dedicated and Dedicated slot with reuse
Capacity:	14 total slots
Assigned Net:	1
Relay:	None
Packing Limit:	P2SP

NPG #9 (Fighter Air Control Uplink)

Participants:	E3(1)/2: transmit/receive CRC(1): transmit/receive. EJSE(1): transmit/receive F15E/F15: receive only
Access:	Dedicated with slot reuse
Capacity:	16 total slots
Assigned Net:	127 (stacked)
Relay:	None
Packing Limit:	P2SP and STD

NPG #9 (Fighter Air Control Backlink)

Participants:	F15E/F15: transmit/receive CRC(1): receive only E3(1)/2: receive only EJSE(1): transmit/receive
Access:	Contention Access 10
Capacity:	96 total slots
Assigned Net:	127 (stacked)
Relay:	None
Packing Limit:	STD

NPG #10 (Electronic Warfare)

Participants:	E3(1) and RJ(1): transmit/receive EJSE(1): receive only
Access:	Dedicated and Dedicated slot with reuse
Capacity:	8 total slots
Assigned Net:	1
Relay:	None.
Packing Limit:	P2SP

NPG #19 (Fighter/Fighter Targeting)

Participants:	F15E/F15: transmit/receive
Access:	Contention Access 14
Capacity:	160 total slots
Assigned Net:	1
Relay:	None
Packing Limit:	STD

AFBTMC11A/USMC Network 8
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

NPG #20 (NC2/NC2 Fighter/Fighter Targeting)

Participants:	F15E/F15: transmit/receive
Access:	Contention Access 14
Capacity:	96 total slots
Assigned Net:	1
Relay:	None
Packing Limit:	P2SP

NPG #29 (Residual Messages)

Participants:	JSTARS(1): transmit/receive JTAOM(1): transmit/receive E3(1)/2: transmit/receive RJ(1): transmit/receive ABCCC(1): transmit/receive CRC(1): transmit/receive
Access:	Dedicated
Capacity:	32 total slots
Assigned Net:	1
Relay:	None.
Packing Limit:	P2SP

NPG #30 (P-Messages)

Participants:	All units transmit/receive
Access:	STD
Capacity:	109 total slots
Assigned Net:	0
Relay:	E3(2)
Packing Limit:	Standard

NPG #31 (T-Messages)

Participants:	JSTARS(1): transmit/receive JTAOM(1): transmit/receive E3(1)/2: receive to relay only RJ(1): transmit/receive ABCCC: transmit/receive CRCI(1): transmit/receive EJSE: receive only F15E/F15: receive only
Access:	STD
Capacity:	444 total slots
Assigned Net:	0
Relay:	E3(1)/2
Packing Limit:	P2SP

AFBTMC11A/USMC Network 8
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

NPG V (IJMS Voice)

Participants:	E3(1)/2: transmit/receive E3I(1): transmit/receive RJ(1): transmit/receive ABCCC: transmit/receive CRC(1): transmit/receive CRCI(1): transmit/receive F15E/F15: transmit/receive
Access:	STD
Capacity:	128 total slots
Assigned Net:	127
Relay:	None
Packing Limit:	STD

AFBTMC11A/USMC Network 8
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

APPENDIX A – AFBTMC11A/USMC Network 8

CONNECTIVITY MATRIX
PULSE DENSITY REPORT
ALLOCATION TABLE
COMSEC CROSS REFERENCE TABLE
TIME LINE DISPLAY
NDL FILENAME TABLE

AFBTMC11A/USMC Network 8
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Connectivity Matrix – AFBTMC11A/USMC Network 8

Slot Group			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NPG Number			P	P	TY	P	TY	T	T	TY	T	T	T	V	3	6	6	TY	7	7	TY	
Net Number			0	2	0	0	0	0	0	0	0	0	127	0	1	1	2	1	1	1	1	
TSEC Variable			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
MSEC Variable																						
Access Mode			D	D		7		D	D		D	D	D	R	4	D	10	D		D	D	
Packing Limit			STD	STD		STD		STD	STD		STD	STD	STD	STD		P2SP	STD	P2SP		P2SP	P2SP	
Per Unit Slots/Frame			1							104						1			32			
Total Slots/Frame			12	1	1	96	96	96	48	48	208	56	36	128	8	8	192	1	1	96	24	24
Participant ID	Net Entry Transmit Enabled	Default Net	Connectivity																			
1.JSTARS(1)	Y	1	T/R		R	R	R	R	R	R	T/R	R	R		T	T/R	R		R	T/R	R	
2.JTAOM(1)	Y	1	T/R		R	R	R	R	R	R	T/R	R	R		T	T/R	R		R	T/R	R	
3.E3(1)	Y	1	T/R		R	R	Y	R	R	Y		R	R	T	T	T/R	R		R	R	Y	
4.E3(2)	Y	1	R	T	Y	R	Y	R	R	Y		R	R	T	T	T/R	R	T	Y	R	Y	
5.E3I(1)	Y		T/R		R	R	Y	T	R	R	R	R	R	T								
6.RJ(1)	Y	1	T/R		R	R	R	R	R	R		T	R		T	T/R	R		R	R	R	
7.ABCCC(1)	Y	1	T/R		R	R	R	R	R	R		R	T		T	T/R	R		R	R	R	
8.CRC(1)	Y	1	T/R		R	R	R							T	T	T/R	R		R	R	T	
9.CRCI(1)	Y		T/R		R	R	R	R	T	R	R	R	R	T								
10.EJSE(1)	Y	1	T/R		R	R	R	R	R	R		R	R		T	T/R	R		R	T/R	R	
11.F15E(1)	Y	1	R		R	T	R	R	R	R		R	R	T	T	R	T		R	R	R	
12.F15(1.1.1)	Y	1	R		R	T	R	R	R	R		R	R	T	T	R	T		R	R	R	

AFBTMC11A/USMC Network 8
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Connectivity Matrix – AFBTMC11A/USMC Network 8 Cont'd

Slot Group		21	22	23	24	25	26	27	28	29	30	31	32	33
NPG Number		7	7	7	8	8	8	9	9	10	10	19	20	29
Net Number		1	1	1	1	1	1	127	127	1	1	1	1	1
TSEC Variable		1	1	1	1	1	1	1	1	1	1	1	2	1
MSEC Variable														
Access Mode		R	D	D	R	D	D	R	10	R	D	14	14	D
Packing Limit		P2SP	P2SP	P2SP	P2SP	P2SP	P2SP	P2SP	STD	P2SP	P2SP	P2SP	P2SP	P2SP
Per Unit Slots/Frame								2						4
Total Slots/Frame		48	16	8	4	4	6	16	96	4	4	160	96	32
Participant ID	Net Entry Transmit Enabled	Default Net	Connectivity											
1.JSTARS(1)	Y	1	R	R	R			T/R						T/R
2.JTAOM(1)	Y	1	R	R	R			T/R						T/R
3.E3(1)	Y	1	T	R	R	T	R		T	R	T	R		T/R
4.E3(2)	Y	1	T	R	R	T	R		T	R	T	R		T/R
5.E3I(1)	Y													
6.RJ(1)	Y	1	R	T	R	R	R				R	T		T/R
7.ABCCC(1)	Y	1	R	R	T	R	R							T/R
8.CRC(1)	Y	1	R	R	R	R	T		T	R				T/R
9.CRCI(1)	Y													
10.EJSE(1)	Y	1	R	R	R	R	R	T/R	T		R	R		T/R
11.F15E(1)	Y	1	R	R	R	R	R		R	T			T	T
12.F15(1.1.1)	Y	1	R	R	R	R	R		R	T			T	T

AFBTMC11A/USMC Network 8
 MARINE CORPS NETWORK DESIGN FACILITY
 NETWORK DESCRIPTION

Pulse Density Report – AFBTMC11A/USMC Network 8

Check for active platform	Participant	Data Without Relay	Data With Relay
	1.JSTARS(1)	9.51%	9.51%
	2.JTAOM(1)	9.51%	9.51%
	3.E3(1)	13.55%	18.24%
	4.E3(2)	13.32%	24.39%
	5.E3I(1)	14.68%	20.93%
	6.RJ(1)	5.44%	5.44%
	7.ABCCC(1)	3.36%	3.36%
	8.CRC(1)	10.16%	10.16%
	9.CRCI(1)	11.56%	11.56%
	10.EJSE(1)	5.34%	5.34%
	11.F15E(1)	41.80%	41.80%
	12.F15(1.1.1)	41.80%	41.80%

If the Frequency Assignment authorizes TADIL-J Voice, add the below percentages to the above platforms transmitting TADIL-J Voice.

		Without Relay	With Relay
2.4 Kbps	Voice A	0.0%	3.30%
	Voice B	0.0%	0.0%

Example of TSDF calculation:

E3(1): (Data with Relay = 18.24%) + (Voice 'A' with Relay = 3.30%)
 Total Data/Voice with Relay = 21.54%

In the above example you would enter the result into the Deconfliction Server. Other platform results may vary if Voice or Relay is used.

AFBTMC11A/USMC Network 8
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Allocation Table – AFBTMC11A/USMC Network 8

SB / Agg	Net Req.	Net	Set	Idx	RRN
1.1	0	0	B	28	9
1.2	0	0	B	34	8
2.1	2	2	C	14	6
3.1	0	0	B	18	6
4.1	0	0	A	2	12
4.2	0	0	A	3	11
5.1	0	0	A	6	12
5.2	0	0	A	11	11
6.1	0	0	A	1	12
6.2	0	0	A	7	11
7.1	0	0	A	15	11
7.2	0	0	B	4	10
8.1	0	0	C	8	11
8.2	0	0	B	6	10
9.1	0	0	A	0	12
9.2	0	0	A	4	12
9.3	0	0	A	5	11
9.4	0	0	A	13	11
9.5	0	0	B	20	9
9.6	0	0	B	52	9
10.1	0	0	B	0	11
10.2	0	0	B	12	10
10.3	0	0	B	60	9
11.1	0	0	B	8	11
11.2	0	0	B	98	8
12.1	127	127	C	1	13
13.1	0	0	B	2	9
14.1	1	1	C	10	9
15.1	1	1	B	1	13
15.2	1	1	B	3	12
16.1	2	2	A	272	6
17.1	1	1	B	274	6
18.1	1	1	B	7	11
18.2	1	1	B	15	11
18.3	1	1	B	10	10
18.4	1	1	B	26	10
19.1	1	1	B	22	10
19.2	1	1	B	50	9
20.1	1	1	C	26	10
20.2	1	1	C	54	9
21.1	1	1	B	14	11
21.2	1	1	C	2	10
22.1	1	1	C	18	10
23.1	1	1	C	42	9
24.1	1	1	B	20	8
25.1	1	1	B	84	8
26.1	1	1	B	82	8
26.2	1	1	B	146	7
27.1	127	127	C	6	10
28.1	127	127	C	3	12
28.2	127	127	C	7	11
29.1	1	1	B	52	8
30.1	1	1	B	116	8
31.1	1	1	A	0	13
31.2	1	1	C	0	11
32.1	1	1	A	5	12
32.2	1	1	C	4	11
33.1	1	1	C	12	11

AFBTMC11A/USMC Network 8
 MARINE CORPS NETWORK DESIGN FACILITY
 NETWORK DESCRIPTION

COMSEC Cross Reference Table – AFBTMC11A/USMC Network 8

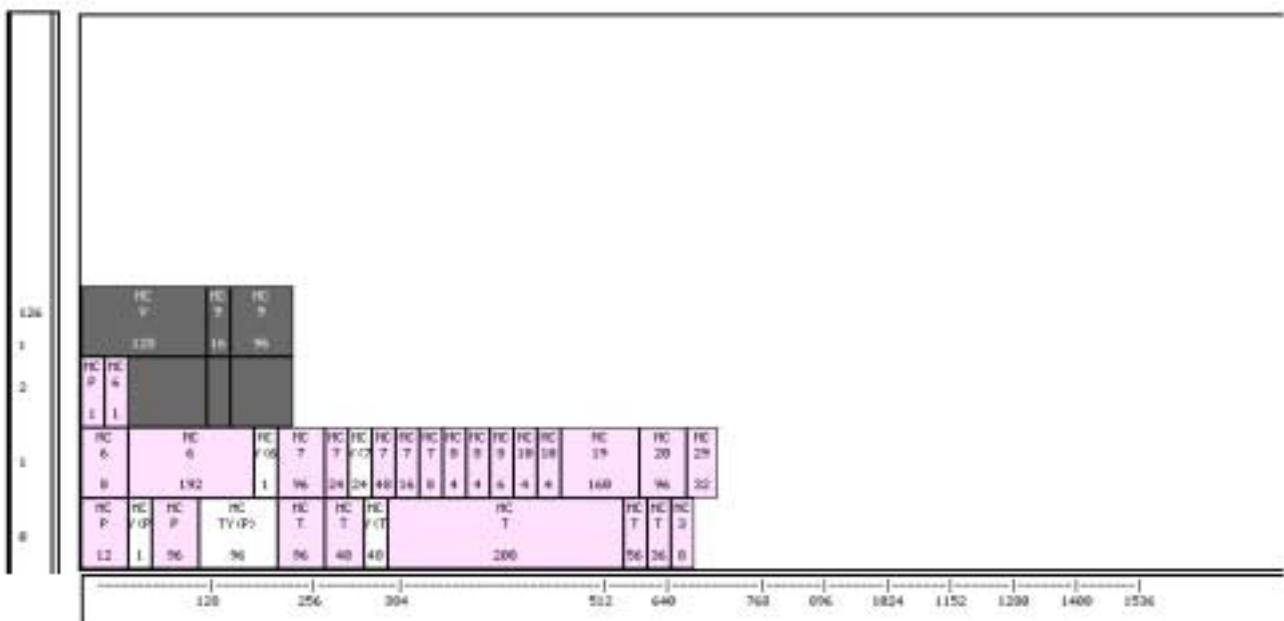
Default MSEC = 1			Default TSEC = 1		
SDU Locations					
Participant	0/1	2/3	4/5	6/7	Overflow
JSTARS(1)	1				
JTAOM(1)	1				
E3(1)	1				
E3(2)	1				
E3I(1)				1	
RJ(1)	1				
ABCCC(1)	1				
CRC(1)	1				
CRCI(1)				1	
EJSE(1)	1				
F15E(1)	1	2			
F15(1.1.1)	1	2			

AFBTMC11A/USMC Network 8
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Time Line – AFBTMC11A/USMC Network 8

Time Line Display Status: CREATED

Nets:



Total Slots/Frame

Note: Not to scale

AFBTMC11A/USMC Network 8
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

NDL File Name Table

Platforms referenced in the below table correspond with specific NDL file names or Network file identification numbers for each respective participant platform.

Network Platform Name By Service		File Name/Network Used By Host System
Marine Corps		
JTAOM	JTAOM(1)	TAOM1_8.PF

AFBTMC11A/USMC Network 8
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

APPENDIX B – AFBTMC11A/USMC Network 8

SHORT FORM REPORT FOR JTAOM (1)

AFBTMC11A/USMC Network 8
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Participant JTAOM (1)

Participant	Block Id. No.	Slot Type	Msg Cat	Total Slots Req'd	Slot Blocks Req'd	Slot Group A=Agg	Slot Group Elemt.	Set	Index	RRN	Net	Relay Delay
JTAOM(1)	1	T	30	1	1	1.1	2	B	284	6	0	0
	2	T	31	104	64	9.2	2	A	4	12	0	0
	3	T	31		32	9.4	2	A	13	11	0	0
	4	T	31		8	9.6	2	B	52	9	0	0
	5	T	3	8	8	13.1	0	B	2	9	0	0
	6	T	6	1	1	14.1	2	C	266	6	1	0
	7	T	7	32	32	18.2	2	B	15	11	1	0
	8	T	8	2	2	26.1	2	B	210	7	1	0
	9	T	29	4	4	33.1	2	C	76	8	1	0
	10	R	30	12	8	1.1	0	B	28	9	0	0
	11	R	30		4	1.2	0	B	34	8	0	0
	12	R	30	1	1	3.1	0	B	18	6	0	0
	13	R	30	96	64	4.1	0	A	2	12	0	0
	14	R	30		32	4.2	0	A	3	11	0	0
	15	R	30	96	64	5.1	0	A	6	12	0	0
	16	R	30		32	5.2	0	A	11	11	0	0
	17	R	31	96	64	6.1	0	A	1	12	0	0
	18	R	31		32	6.2	0	A	7	11	0	0
	19	R	31	48	32	7.1	0	A	15	11	0	0
	20	R	31		16	7.2	0	B	4	10	0	0
	21	R	31	48	32	8.1	0	C	8	11	0	0
	22	R	31		16	8.2	0	B	6	10	0	0
	23	R	31	208	64	9.1	0	A	0	12	0	0
	24	R	31		64	9.2	0	A	4	12	0	0
	25	R	31		32	9.3	0	A	5	11	0	0
	26	R	31		32	9.4	0	A	13	11	0	0
	27	R	31		8	9.5	0	B	20	9	0	0
	28	R	31		8	9.6	0	B	52	9	0	0
	29	R	31	56	32	10.1	0	B	0	11	0	0
	30	R	31		16	10.2	0	B	12	10	0	0
	31	R	31		8	10.3	0	B	60	9	0	0
	32	R	31	36	32	11.1	0	B	8	11	0	0
	33	R	31		4	11.2	0	B	98	8	0	0
	34	R	6	8	8	14.1	0	C	10	9	1	0
	35	R	6	192	128	15.1	0	B	1	13	1	0
	36	R	6		64	15.2	0	B	3	12	1	0
	37	R	6	1	1	17.1	0	B	274	6	1	0
	38	R	7	96	32	18.1	0	B	7	11	1	0
	39	R	7		32	18.2	0	B	15	11	1	0
	40	R	7		16	18.3	0	B	10	10	1	0
	41	R	7		16	18.4	0	B	26	10	1	0
	42	R	7	24	16	19.1	0	B	22	10	1	0
	43	R	7		8	19.2	0	B	50	9	1	0
	44	R	7	24	16	20.1	0	C	26	10	1	0
	45	R	7		8	20.2	0	C	54	9	1	0
	46	R	7	48	32	21.1	0	B	14	11	1	0
	47	R	7		16	21.2	0	C	2	10	1	0
	48	R	7	16	16	22.1	0	C	18	10	1	0
	49	R	7	8	8	23.1	0	C	42	9	1	0
	50	R	8	6	4	26.1	0	B	82	8	1	0
	51	R	8		2	26.2	0	B	146	7	1	0
	52	R	29	32	32	33.1	0	C	12	11	1	0

AFBTMD11A/USMC Network 5
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Section 5

Network AFBTMD11A

USMC Network 9 – ADCP(1)

AFBTMD11A/USMC Network 5
 MARINE CORPS NETWORK DESIGN FACILITY
 NETWORK DESCRIPTION

5.0 Executive Summary – AFBTMD11A/USMC Network 9					
Network:	AFBTMD11A USMC Networks 6, 7, 8, 9	Created for:	USMC Network variants created for ADCP and JTAOM participation in AF Network AFBT0001A		
Use Limitations:	IPF OVERRIDE = 100/50				
Participants:	USMC Platforms	USN Platforms	USA Platforms	USAF Platforms	Other Platforms
USMC Network 9	1 ADCP	NONE	NONE	1 - JSTARS 2 - E3(1) 1 - E3I 1 - RJ 1 - ABCCC 1 - CRC 1 - CRCI 1 - EJSE 1 - F15 1 - F15E	
Operational Summary:	1. Highest Platform TSDF = 41.80%				
Network Requested by:	MACS-2 ATTN: 1stLt Smith				
Send comments and Recommendations to:	USMC Network Design Facility Attn: AD-09 (MCNDF) Box 555171 Camp Pendleton, CA 92055-5171 E-mail: mcndf@mctssa.usmc.mil Website: http://www.mctssa.usmc.mil Telephone: DSN 365-2796/2133 COMM (760) 725-2796/2133				

AFBTMD11A/USMC Network 5
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

5.1 USMC Network 9 Functional Description – ADCP(1)

USMC Network 9 was developed as a variant of Army Network AFBTMD11A by the Marine Corps Network Design Facility to support joint ground and air training operations for USMC platforms. Network 9 variant allows ADCP(1) to use JSTARS(2) time slots as a participant in the network. The network participants are: JSTARS(1), ADCP(1), E3(1)/2, E3I(1), RJ(1), ABCCC(1), CRC(1), CRCI(1), EJSE(1), F15(1.1.1), F15E(1).

NOTES:

5. Network **IPF Override** is set to **1**, **TSDF** is set to **100/50**, **Communications Mode** is set to **Mode 1**, **TDMA Range** is **300 nmi**, **TSEC** and **MSEC** are set to **1**.
6. **JICO oversees all responsibility in managing network TSDF, NTR, and Relay assignments.**
7. **E3(1) and E3(2) are the only relay platforms assigned in the network.**
8. **ADCP(1) cannot be in the network if JSTARS(2) is a participant.**

5.2 Operational Summary

1. 100/50

All participants do not have line of sight with every other participant. Only E3(1) or E3(2) will perform relay functions as designated by JICO.

5.3 Use Limitations

1. 100/50 IPF

5.4 Participants

USMC Platforms	USN Platforms	USA Platforms	USAF Platforms	Other
1 ADCP			1 JSTARS 2 E3 1 E3I 1 RJ 1 ABCCC 1 CRC 1 CRCI 1 EJSE 1 F15E/ 1 F15	

AFBTMD11A/USMC Network 5
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

5.5 Network Participation Groups

NPG #3 (RTT-B)

Participants:	All units, except E3I(1) and CRCI(1): transmit/receive
Access:	Contention access 4
Capacity:	9 total slots - 8 total contention; 1 s/f/u for E3(2)
Assigned Net:	0
Relay:	None
Packing Limit:	RTT

NPG #6 (PPLI-B)

Participants:	All units, except E3I(1) and CRCI(1)
Access:	Dedicated and Contention 10 Access
Capacity:	201 total slots
Assigned Net:	Net 1 all; net 2 for E3(2)
Relay:	E3(2) – Only E3(2) PPLI is relayed
Packing Limit:	P2SP and STD

NPG #7 (Surveillance)

Participants:	JSTARS(1): transmit/receive. Own surveillance is not relayed. ADCP(1): transmit/receive. Own surveillance is not relayed. E3(1)/2: transmit/receive. Own surveillance is not relayed. RJ(1): transmit/receive. Own surveillance is not relayed. ABCCC(1): transmit/receive. Own surveillance is not relayed. CRC(1): transmit/receive. EJSE(1): receive only F15E/F15: receive only
Access:	Dedicated and Dedicated slot with reuse.
Capacity:	288 total slots
Assigned Net:	1
Relay:	E3(1) and E3(2) (Only CRC's surveillance is relayed in the network)
Packing Limit:	P2SP

NPG #8 (Weapons Coordination and Mission Management)

Participants:	JSTARS(1): transmit/receive ADCP(1): transmit/receive E3(1)/2: transmit/receive. RJ(1): receive only ABCCC(1): receive only CRC(1): transmit/receive.
---------------	--

AFBTMD11A/USMC Network 5
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

	EJSE(1): transmit/receive
	F15E/F15: receive only
Access:	Dedicated and Dedicated slot with reuse
Capacity:	14 total slots
Assigned Net:	1
Relay:	None
Packing Limit:	P2SP

NPG #9 (Fighter Air Control Uplink)

Participants:	E3(1)/2: transmit/receive
	CRC(1): transmit/receive.
	EJSE(1): transmit/receive
	F15E/F15: receive only
Access:	Dedicated with slot reuse
Capacity:	16 total slots
Assigned Net:	127 (stacked)
Relay:	None
Packing Limit:	P2SP and STD

NPG #9 (Fighter Air Control Backlink)

Participants:	F15E/F15: transmit/receive
	CRC(1): receive only
	E3(1)/2: receive only
	EJSE(1): transmit/receive
Access:	Contention Access 10
Capacity:	96 total slots
Assigned Net:	127 (stacked)
Relay:	None
Packing Limit:	STD

NPG #10 (Electronic Warfare)

Participants:	E3(1) and RJ(1): transmit/receive
	EJSE(1): receive only
Access:	Dedicated and Dedicated slot with reuse
Capacity:	8 total slots
Assigned Net:	1
Relay:	None.
Packing Limit:	P2SP

NPG #19 (Fighter/Fighter Targeting)

Participants:	F15E/F15: transmit/receive
Access:	Contention Access 14
Capacity:	160 total slots
Assigned Net:	1
Relay:	None
Packing Limit:	STD

AFBTMD11A/USMC Network 5
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

NPG #20 (NC2/NC2 Fighter/Fighter Targeting)

Participants:	F15E/F15: transmit/receive
Access:	Contention Access 14
Capacity:	96 total slots
Assigned Net:	1
Relay:	None
Packing Limit:	P2SP

NPG #29 (Residual Messages)

Participants:	JSTARS(1): transmit/receive ADCP(1): transmit/receive E3(1)/2: transmit/receive RJ(1): transmit/receive ABCCC(1): transmit/receive CRC(1): transmit/receive
Access:	Dedicated
Capacity:	32 total slots
Assigned Net:	1
Relay:	None.
Packing Limit:	P2SP

NPG #30 (P-Messages)

Participants:	All units transmit/receive
Access:	STD
Capacity:	109 total slots
Assigned Net:	0
Relay:	E3(2)
Packing Limit:	Standard

NPG #31 (T-Messages)

Participants:	JSTARS(1): transmit/receive ADCP(1): transmit/receive E3(1)/2: receive to relay only RJ(1): transmit/receive ABCCC: transmit/receive CRCI(1): transmit/receive EJSE: receive only F15E/F15: receive only
Access:	STD
Capacity:	444 total slots
Assigned Net:	0
Relay:	E3(1)/2
Packing Limit:	P2SP

AFBTMD11A/USMC Network 5
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

NPG V (IJMS Voice)

Participants:	E3(1)/2: transmit/receive E3I(1): transmit/receive RJ(1): transmit/receive ABCCC: transmit/receive CRC(1): transmit/receive F15E/F15: transmit/receive
Access:	STD
Capacity:	128 total slots
Assigned Net:	127
Relay:	None
Packing Limit:	STD

AFBTMD11A/USMC Network 5
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

APPENDIX A – AFBTMD11A/USMC Network 9

CONNECTIVITY MATRIX
PULSE DENSITY REPORT
ALLOCATION TABLE
COMSEC CROSS REFERENCE TABLE
TIME LINE DISPLAY
NDL FILENAME TABLE

AFBTMD11A/USMC Network 5
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Connectivity Matrix – AFBTMD11A/USMC Network 9

Slot Group		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NPG Number		P	P	TY	P	TY	T	T	TY	T	T	T	V	3	6	6	6	TY	7	7	TY
Net Number		0	2	0	0	0	0	0	0	0	0	0	127	0	1	1	2	1	1	1	1
TSEC Variable		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSEC Variable																					
Access Mode		D	D		7		D	D		D	D	D	R	4	D	10	D		D	D	
Packing Limit		STD	STD		STD		STD	STD		STD	STD	STD	STD		P2SP	STD	P2SP		P2SP	P2SP	
Per Unit Slots/Frame		1								104					1				32		
Total Slots/Frame		12	1	1	96	96	96	48	48	208	56	36	128	8	8	192	1	1	96	24	24
Participant ID	Net Entry Transmit Enabled	Default Net	Connectivity																		
1.JSTARS(1)	Y	1	T/R		R	R	R	R	R	T/R	R	R		T	T/R	R		R	T/R	R	R
2.ADCP(1)	Y	1	T/R		R	R	R	R	R	R/T/R	R	R		T	T/R	R		R	T/R	R	R
3.E3(1)	Y	1	T/R		R	R	Y	R	R	Y		R	R	T	T	T/R	R		R	R	Y
4.E3(2)	Y	1	R	T	Y	R	Y	R	R	Y		R	R	T	T	T/R	R	T	Y	R	Y
5.E3I(1)	Y		T/R		R	R	Y	T	R	R	R	R	R	T							
6.RJ(1)	Y	1	T/R		R	R	R	R	R		T	R		T	T/R	R		R	R	R	R
7.ABCCC(1)	Y	1	T/R		R	R	R	R	R		R	T		T	T/R	R		R	R	R	R
8.CRC(1)	Y	1	T/R		R	R	R						T	T	T/R	R		R	R	T	R
9.CRCI(1)	Y		T/R		R	R	R	R	T	R	R	R	T								
10.EJSE(1)	Y	1	T/R		R	R	R	R	R		R	R		T	T/R	R		R	T/R	R	R
11.F15E(1)	Y	1	R		R	T	R	R	R		R	R	T	T	R	T		R	R	R	R
12.F15(1.1.1)	Y	1	R		R	T	R	R	R		R	R	T	T	R	T		R	R	R	R

AFTBMD11A/USMC Network 5
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Connectivity Matrix – AFTBMD11A/USMC Network 9 Cont'd

Slot Group		21	22	23	24	25	26	27	28	29	30	31	32	33
NPG Number		7	7	7	8	8	8	9	9	10	10	19	20	29
Net Number		1	1	1	1	1	1	127	127	1	1	1	1	1
TSEC Variable		1	1	1	1	1	1	1	1	1	1	1	2	1
MSEC Variable														
Access Mode		R	D	D	R	D	D	R	10	R	D	14	14	D
Packing Limit		P2SP	P2SP	P2SP	P2SP	P2SP	P2SP	P2SP	STD	P2SP	P2SP	P2SP	P2SP	P2SP
Per Unit Slots/Frame								2						4
Total Slots/Frame		48	16	8	4	4	6	16	96	4	4	160	96	32
Participant ID	Net Entry Transmit Enabled	Default Net	Connectivity											
1.JSTARS(1)	Y	1	R	R	R			T/R						T/R
2.ADCP(1)	Y	1	R	R	R			T/R						T/R
3.E3(1)	Y	1	T	R	R	T	R		T	R	T	R		T/R
4.E3(2)	Y	1	T	R	R	T	R		T	R	T	R		T/R
5.E3I(1)	Y													
6.RJ(1)	Y	1	R	T	R	R	R				R	T		T/R
7.ABCCC(1)	Y	1	R	R	T	R	R							T/R
8.CRC(1)	Y	1	R	R	R	R	T		T	R				T/R
9.CRCI(1)	Y													
10.EJSE(1)	Y	1	R	R	R	R	R	T/R	T		R	R		T/R
11.F15E(1)	Y	1	R	R	R	R	R		R	T			T	T
12.F15(1.1.1)	Y	1	R	R	R	R	R		R	T			T	T

AFBT0011A/USMC Network 9
 MARINE CORPS NETWORK DESIGN FACILITY
 NETWORK DESCRIPTION

Pulse Density Report - AFBTMD11A/USMC Network 9

Check for active platform	Participant	Data Without Relay	Data With Relay
	1.JSTARS(1)	9.51%	9.51%
	2.ADCP(1)	9.51%	9.51%
	3.E3(1)	13.55%	18.24%
	4.E3(2)	13.32%	24.39%
	5.E3I(1)	14.68%	20.93%
	6.RJ(1)	5.44%	5.44%
	7.ABCCC(1)	3.36%	3.36%
	8.CRC(1)	10.16%	10.16%
	9.CRCI(1)	11.59%	11.59%
	10.EJSE(1)	5.34%	5.34%
	11.F15E(1)	41.80%	41.80%
	12.F15(1.1.1)	41.80%	41.80%

If the Frequency Assignment authorizes TADIL-J Voice, add the below percentages to the above platforms transmitting TADIL-J Voice.

		Without Relay	With Relay
2.4 Kbps	Voice A	0.0%	3.30%
	Voice B	0.0%	0.0%

Example of TSDF calculation:

E3(1): (Data with Relay = 18.24%) + (Voice 'A' with Relay = 3.30%)
 Total Data/Voice with Relay = 21.54%

In the above example you would enter the result into the Deconfliction Server. Other platform results may vary if Voice or Relay is used.

AFT0011A/USMC Network 9
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Allocation Table – AFBTMD11A/USMC Network 9

SB / Agg	Net Req.	Net	Set	Idx	RRN
1.1	0	0	B	28	9
1.2	0	0	B	34	8
2.1	2	2	C	14	6
3.1	0	0	B	18	6
4.1	0	0	A	2	12
4.2	0	0	A	3	11
5.1	0	0	A	6	12
5.2	0	0	A	11	11
6.1	0	0	A	1	12
6.2	0	0	A	7	11
7.1	0	0	A	15	11
7.2	0	0	B	4	10
8.1	0	0	C	8	11
8.2	0	0	B	6	10
9.1	0	0	A	0	12
9.2	0	0	A	4	12
9.3	0	0	A	5	11
9.4	0	0	A	13	11
9.5	0	0	B	20	9
9.6	0	0	B	52	9
10.1	0	0	B	0	11
10.2	0	0	B	12	10
10.3	0	0	B	60	9
11.1	0	0	B	8	11
11.2	0	0	B	98	8
12.1	127	127	C	1	13
13.1	0	0	B	2	9
14.1	1	1	C	10	9
15.1	1	1	B	1	13
15.2	1	1	B	3	12
16.1	2	2	A	272	6
17.1	1	1	B	274	6
18.1	1	1	B	7	11
18.2	1	1	B	15	11
18.3	1	1	B	10	10
18.4	1	1	B	26	10
19.1	1	1	B	22	10
19.2	1	1	B	50	9
20.1	1	1	C	26	10
20.2	1	1	C	54	9
21.1	1	1	B	14	11
21.2	1	1	C	2	10
22.1	1	1	C	18	10
23.1	1	1	C	42	9
24.1	1	1	B	20	8
25.1	1	1	B	84	8
26.1	1	1	B	82	8
26.2	1	1	B	146	7
27.1	127	127	C	6	10
28.1	127	127	C	3	12
28.2	127	127	C	7	11
29.1	1	1	B	52	8
30.1	1	1	B	116	8
31.1	1	1	A	0	13
31.2	1	1	C	0	11
32.1	1	1	A	5	12
32.2	1	1	C	4	11
33.1	1	1	C	12	11

AFBT0011A/USMC Network 9
 MARINE CORPS NETWORK DESIGN FACILITY
 NETWORK DESCRIPTION

COMSEC Cross Reference Table – AFBTMD11A/USMC Network 9

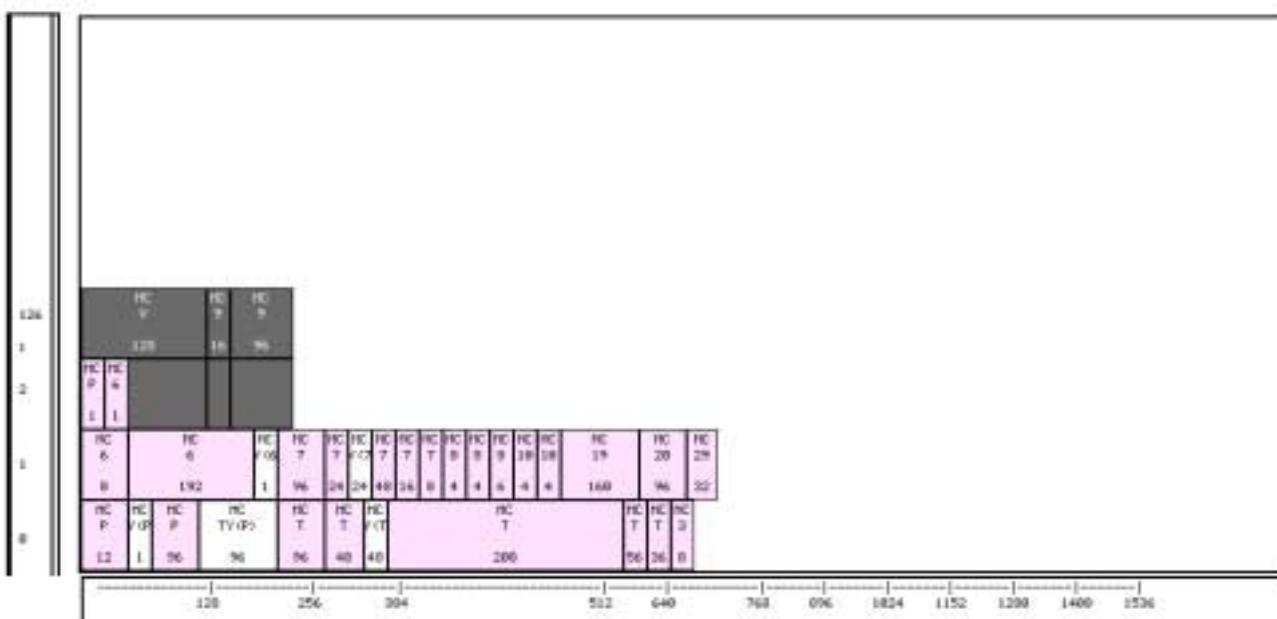
Default MSEC = 1		Default TSEC = 1			
SDU Locations					
Participant	0/1	2/3	4/5	6/7	Overflow
JSTARS(1)	1				
ADCP(1)	1				
E3(1)	1				
E3(2)	1				
E3I(1)				1	
RJ(1)	1				
ABCCC(1)	1				
CRC(1)	1				
CRCI(1)				1	
EJSE(1)	1				
F15E(1)	1	2			
F15(1.1.1)	1	2			

AFBT0011A/USMC Network 9
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Time Line – AFBTMD11A/USMC Network 9

Time Line Display Status: CREATED

Nets:



Total Slots/Frame

Note: Not to scale

AFBT0011A/USMC Network 9
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

NDL File Name Table

Platforms referenced in the below table correspond with specific NDL file names or Network file identification numbers for each respective participant platform.

Network Platform Name By Service		File Name/Network Used By Host System
Marine Corps		
ADCP	ADCP(1)	ADCP1_9.PF

AFBT0011A/USMC Network 9
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

APPENDIX B – AFBTMD11A/USMC Network 9

SHORT FORM REPORT FOR ADCP (1)

AFTB0011A/USMC Network 9
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Participant ADCP (1)

Participant	Block Id. No.	Slot Type	Msg Cat	Total Slots Req'd	Slot Blocks Req'd	Slot Group A=Agg	Slot Group Elem.	Set	Index	RRN	Net	Relay Delay
ADCP(1)	1	T	30	1	1	1.1	2	B	284	6	0	0
	2	T	31	104	64	9.2	2	A	4	12	0	0
	3	T	31		32	9.4	2	A	13	11	0	0
	4	T	31		8	9.6	2	B	52	9	0	0
	5	T	3	8	8	13.1	0	B	2	9	0	0
	6	T	6	1	1	14.1	2	C	266	6	1	0
	7	T	7	32	32	18.2	2	B	15	11	1	0
	8	T	8	2	2	26.1	2	B	210	7	1	0
	9	T	29	4	4	33.1	2	C	76	8	1	0
	10	R	30	12	8	1.1	0	B	28	9	0	0
	11	R	30		4	1.2	0	B	34	8	0	0
	12	R	30	1	1	3.1	0	B	18	6	0	0
	13	R	30	96	64	4.1	0	A	2	12	0	0
	14	R	30		32	4.2	0	A	3	11	0	0
	15	R	30	96	64	5.1	0	A	6	12	0	0
	16	R	30		32	5.2	0	A	11	11	0	0
	17	R	31	96	64	6.1	0	A	1	12	0	0
	18	R	31		32	6.2	0	A	7	11	0	0
	19	R	31	48	32	7.1	0	A	15	11	0	0
	20	R	31		16	7.2	0	B	4	10	0	0
	21	R	31	48	32	8.1	0	C	8	11	0	0
	22	R	31		16	8.2	0	B	6	10	0	0
	23	R	31	208	64	9.1	0	A	0	12	0	0
	24	R	31		64	9.2	0	A	4	12	0	0
	25	R	31		32	9.3	0	A	5	11	0	0
	26	R	31		32	9.4	0	A	13	11	0	0
	27	R	31		8	9.5	0	B	20	9	0	0
	28	R	31		8	9.6	0	B	52	9	0	0
	29	R	31	56	32	10.1	0	B	0	11	0	0
	30	R	31		16	10.2	0	B	12	10	0	0
	31	R	31		8	10.3	0	B	60	9	0	0
	32	R	31	36	32	11.1	0	B	8	11	0	0
	33	R	31		4	11.2	0	B	98	8	0	0
	34	R	6	8	8	14.1	0	C	10	9	1	0
	35	R	6	192	128	15.1	0	B	1	13	1	0
	36	R	6		64	15.2	0	B	3	12	1	0
	37	R	6	1	1	17.1	0	B	274	6	1	0
	38	R	7	96	32	18.1	0	B	7	11	1	0
	39	R	7		32	18.2	0	B	15	11	1	0
	40	R	7		16	18.3	0	B	10	10	1	0
	41	R	7		16	18.4	0	B	26	10	1	0
	42	R	7	24	16	19.1	0	B	22	10	1	0
	43	R	7		8	19.2	0	B	50	9	1	0
	44	R	7	24	16	20.1	0	C	26	10	1	0
	45	R	7		8	20.2	0	C	54	9	1	0
	46	R	7	48	32	21.1	0	B	14	11	1	0
	47	R	7		16	21.2	0	C	2	10	1	0
	48	R	7	16	16	22.1	0	C	18	10	1	0
	49	R	7	8	8	23.1	0	C	42	9	1	0
	50	R	8	6	4	26.1	0	B	82	8	1	0
	51	R	8		2	26.2	0	B	146	7	1	0
	52	R	29	32	32	33.1	0	C	12	11	1	0